

m/027/007

## **DIVISION TOUR DRUM MINE SITE**

October 14, 1999

The Drum Mine was a conventional gold heap leach operation with all of the safety and environmental problems associated with such operation.. It was operated by Western States Minerals Corporation (WSMC) from 1984 until October 1988, when it was sold to Jumbo Mining Company (Jumbo). Jumbo operated the mine until 1990 and declared bankruptcy November 10, 1997.

There was a partial state permit transfer from WSMC to Jumbo at that time. Jumbo also assumed WSMC's Plan of Operations (Plan), including the reclamation responsibilities of WSMC under the approved Plan, at that time. Disturbances at the mine included pits, heaps, dumps, ponds, the plant site, access roads, and drill pads and sites. Not all of these disturbances were included in WSMC's Plan, hence the reclamation liability for them remained with WSMC.

The Drum mine consists of two open pits, one of which had an underground operation based on the pit floor; three low grade heaps, seven high grade heaps (two of which were merged into one); five waste dumps; pregnant and barren ponds; a mill building; and other facilities and equipment. The open pits are largely unbermed and represent a significant safety hazard, as do the open underground facilities in the SW EX pit. The heaps and waste dump sides are too steep and they need to be regraded to a stable configuration.

A total 255 acres need to be reclaimed. This excludes some of the outlying exploration areas. Of this total, WSMC is responsible for reclaiming 103 acres, and Jumbo has the reclamation responsibility for 108 acres, including the Alto haul road. The Bureau of Land Management (BLM) and the Utah Division of Oil, Gas and Mining (DOGM) have seized Jumbo's reclamation bond to enable them to conduct reclamation of Jumbo's share of the reclamation. An additional 44 acres would be disturbed during reclamation. This area would be used as a source for topsoil to reclaim the heaps and dumps.

The proposed action is a compromise between the ideal reclamation of the Drum Mine and the available funds for completing Jumbo's portion of the reclamation. As covered in the reclamation agreement between WSMC, DOGM, and BLM, WSMC will use the available funds from DOGM and BLM and complete final reclamation on the Drum Mine. Reclamation operations would commence upon approval of the reclamation plan, signing of the settlement agreement between the interested parties, and when weather conditions allow. Some variances from Utah standards would be granted. If the appropriate documents are signed and approvals obtained, reclamation may start as early as the end of September 1999. The proposed action is summarized below.

- Disturbed areas within the project boundary, except the SW EX Pit and the NR Pit, would be reclaimed by regrading, applying growth media (topsoil), fertilization (using manure or other bio-solids), and seeding. Surface drainage would be reestablished throughout the area. A variance request from the open pit reclamation requirement of Utah regulation R647-4-111.7 would be granted by DOGM.
- All remaining buildings and facilities would be dismantled and disposed of appropriately. Concrete foundations would be broken up and placed either in the mine waste dump and buried, or buried in place.

- Any solution remaining in the process water ponds would be sprayed on the roads during mine reclamation for dust control. The sediment in the ponds would be covered with fill material prior to the placement of soil and seeding.
- All haul roads (including the center portion of the Alto haul road) would be reclaimed by regrading, ripping.
- Reestablish a stable environment that will support a diverse self-sustaining vegetative and wildlife habitat, consistent with accepted land use objectives.
- Achieve a visual compatibility within the surrounding landscape.

#### Regrading and Recontouring:

- The final slope angle for the heap leach pads and the waste rock dumps would be 3h:1v whenever feasible. Steeper slopes would be negotiated whenever not feasible. A bulldozer would be the primary tool used achieving the desired slopes. Disturbed areas that do not require recontouring would be scarified in preparation for placement of growth medium.
- All available soil would be removed from those areas to be covered during regrading of the heap leach pads and waste rock dumps. The soil removed would be either stockpiled for later use or placed directly on top of already recontoured areas.

#### Growth Medium Replacement:

- Approximately six inches of suitable growth medium (soil) would be placed on top of all disturbed areas where no soil currently exists. The soil would be spread using a bulldozer. All spreading operations would be conducted on the contour to minimize erosion.
- The currently stockpiled soil is insufficient to cover the disturbed areas. An area of approximately 44 acres would need to be disturbed to supply the additional soil needed.
- Not all of the soil would be removed from the soil borrow area. Sufficient soil would be left to support plant growth.

#### Revegetation and Stabilization:

- Biosolids (manure) would be applied to the areas to be revegetated to enhance the soil fertility. The final finished seedbed would be "dimpled," thus minimizing erosion, optimizing available soil moisture, and producing a surface appropriate for broadcast seeding. Seedbed preparation would occur just prior to seeding to provide the highest probability for successful germination.

#### Hazardous Materials:

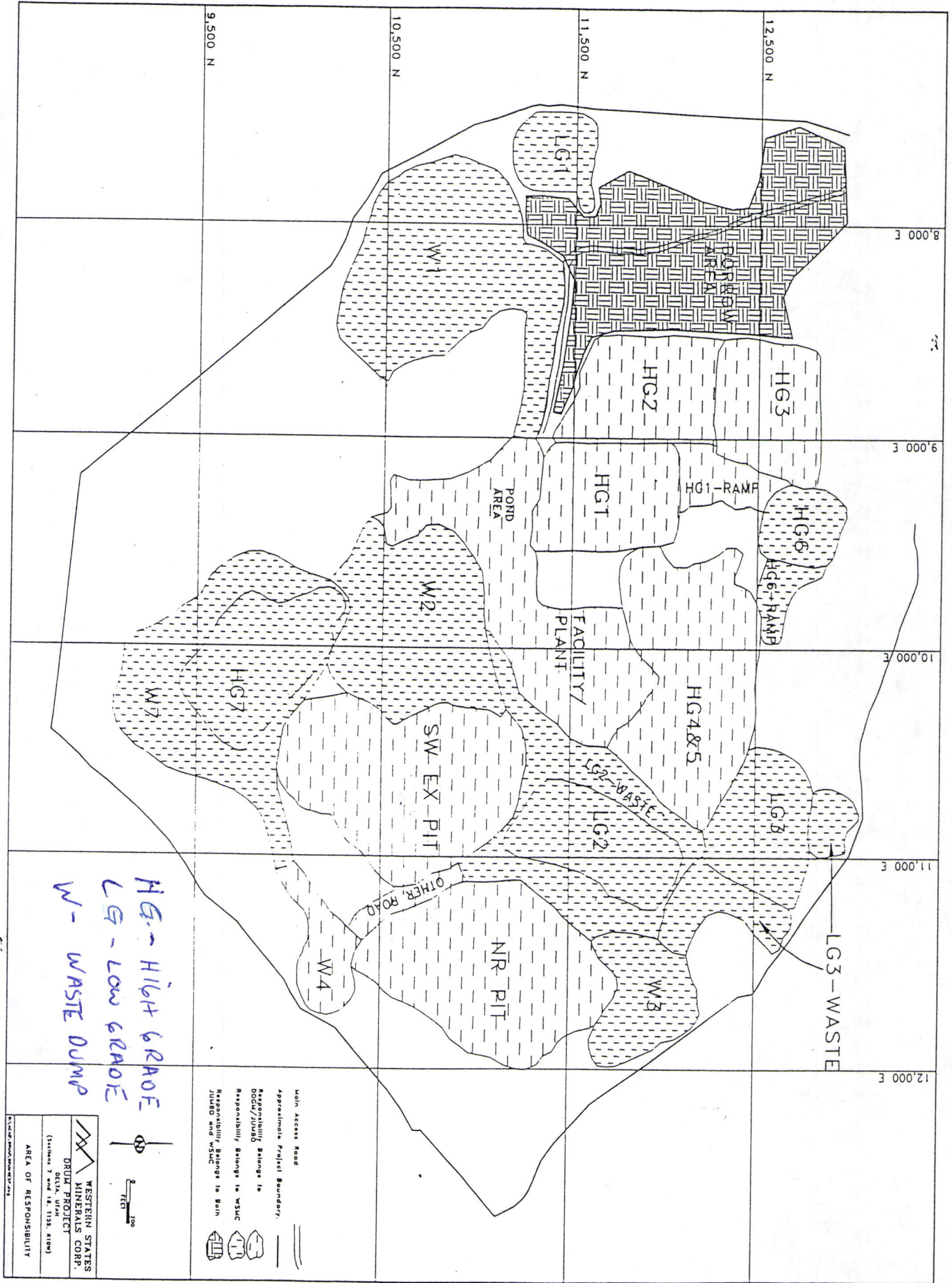
- Any hazardous materials found would be disposed of off site at an appropriate disposal facility. Hydrocarbon contaminated soils would be placed on waste dump W1 for evaporation and naturally occurring bio-remediation.

The proposed seed mix is:

<i>Species</i>	<i>Variety</i>	<i>lb/Acre (pure live seed)</i>
Crested Wheatgrass	Hycrest	2.0
Immigrant Kochia	Immigrant	0.5
Alfalfa	Ladak	1.0
Fourwing Saltbush	Native	2.0
Wyoming Big Sagebrush	-	0.1
Indian Ricegrass	Paloma	3.0
Intermediate Wheatgrass	Luna	2.0
Western Wheatgrass	Rosanna	2.0
Yellow Sweet Clover	-	0.5

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HG - HIGH GRADE  
 LG - LOW GRADE  
 W - WASTE DUMP

WESTERN STATES  
 DRUM PROJECT  
 (Sections 2 and 18, T13S, R10W)  
 AREA OF RESPONSIBILITY

Main Access Road  
 Approximate Project Boundary  
 Responsibility belongs to  
 DODC/JUAB  
 Responsibility belongs to WSAC  
 Responsibility belongs to both  
 JUAB and WSAC

0 100  
feet